

## Foulness: A Feasible Alternative?

**O**F ALL THE POSSIBLE ALTERNATIVES put forward by the many pressure-groups opposed to the choice of Stansted as London's third airport, none has been the subject of a really detailed study. This has now been rectified by the Noise Abatement Society, which last week published a comprehensive report\* on a project to build an airport on reclaimed land off the Essex coast near Foulness Island. The 77-page report, liberally laced with charts and tables, was commissioned by the society, at a cost of £20,000, only six months ago. It was prepared by four independent consultants with emphasis not so much on noise considerations as on the practicalities of airport siting and design. The consultants were: Covell, Matthews and Partners, architects and planning consultants; Aviation Property Consultants; Felix Adler and Partners, consulting engineers; and Mr Harvey R. Cole, economic consultant.

Publication of the report coincided with the announcement that the Greater London Council had called for a further inquiry into the third airport question, and reports that the present incumbent of the Presidency of the Board of Trade, Mr Anthony Crosland, was not happy with the firm view taken by his predecessor, Mr Douglas Jay, that Stansted was the only site. It has long been known that Stansted was one of the Government's most irritating home political problems.

The result of the study, predictably, finds the Foulness site to be preferable to Stansted in all aspects except for transport access, distance and cost. Even so, these aspects are marginal, as are the aspects in which Foulness scores; indeed a close reading of the report reveals that the short-term advantage would lie with Stansted. In the rapidly expanding air transport world, however, it ought to be the long term consideration which carries any weight, and in this respect Foulness has distinct advantages. Primarily it is capable of expansion beyond the maximum four runways which Stansted is planned to have; it can be custom-built from scratch, without any of the local planning worries which beset any land airport expansion; lastly, its existence could well be the spur which will develop Britain's own embryo rapid transit system, the Hovertrain, which is now being developed by an offshoot of the National Research Development Corporation.

From figures given in the White Paper on the Third London Airport, published earlier this year, the study concludes that by 1977 the forecast traffic demand will saturate Heathrow (with an extended runway 28L), Gatwick (with its second runway in operation) and Stansted (using its present second single runway to capacity). It is on this basis that the study concludes that there remain ten years in which to plan and build the third airport. It is appreciated that the problem of planning for the succeeding 25 years is considerably more difficult, but that if the Government's forecast of 1980 traffic levels (twice the number of air transport movements and three times the number of passengers compared with 1966) a requirement for an airport with four parallel runways exists.

The plan for an airport at Foulness should not be confused with earlier proposals to build an airport on Foulness Island itself. The present scheme is to reclaim 9,000 acres of the Maplin Sands, an area some 15 miles long and three miles wide which is uncovered at low tide. The reclaimed site will be surrounded by an embankment and filled in with sand dredged from nearby sites. A system of pumps will be installed so that the water table is kept to the desired level.

Inside the embankment all the runways, approach structures and terminal buildings will be constructed, many of the latter underground, taking advantage of the natural slope of the land. Access by rail and rapid transit system would also be made to the central terminal building along underground tracks, while a road would run along the top of the embankment. Runway layout would be in the form of two pairs of parallel 15,000ft runways—a pair on each side of the central terminal building—each runway having magnetic headings of 040° and 220°. The inner runways would be 6,000ft apart while the outer two would be a further 2,000ft away. Provi-

sion is made for an additional 3,000ft of level ground at each end of all the runways for the accommodation of approach lights and ILS equipment.

### Foulness and Stansted Compared

**Environment** "The area and shape of Maplin Sands (says the study) is such as to offer all the land that would be wanted for a major international airport and indeed more than necessary. Generally its surface lies exposed except when covered by high tides. The greater part of the area required for an airport is less than two fathoms below, and only a small proportion three fathoms below, high tide level, when these occur.

"It thus follows that the reclamation of this 'land' below high water level does not represent a prodigious engineering operation. The whole of the area necessary for an airport lies exposed except when covered by exceptionally high tides.

"It will be appreciated that the layout proposed, with runways roughly NE/SW, will ensure that the approach and departure flight paths will be over the sea. All flights will be above noise nuisance altitudes . . . over land.

"Stansted, comprising some 850 acres at present, has one 10,000ft runway. Additional land required for its development must be purchased under special legislation and compensation paid to those concerned. By the exercise of such compulsory powers land will be acquired, but the cost would be very high and the areas required very considerable."

A further 8,150 acres will be needed in order to build one parallel runway, while another 9,000 acres (18,000 acres in all) would be needed if two pairs of parallel runways were built.

**Engineering** "The land for Stansted presents no particular engineering problems although large-scale earth moving will be involved in creating flat areas essential for an airport. Drainage will be required and there will be a heavy load imposed on road and rail communications over the construction period.

"It is estimated that reclamation of land for Foulness will cost £6,400 per acre and could be completed in two years. . . . The total sum involved amounts to £58,000,000. No detailed information is available about the cost of acquiring the land required at Stansted, but having in mind the built-up areas involved and the very high compensation which will have to be paid, it is likely to cost at least as much as the cost of creating the site for Foulness.

**Meteorological Considerations** "Comparison of records of visibility taken over a six year period (1959 to 1964) show that Foulness has a far better record than Stansted. . . . There is not more early morning mist at Foulness, as many have said, and in Winter months there are periods when poor visibility is twice as frequent at Stansted.

"In the matter of windspeed, Foulness emerges a distinct favourite. There is a small percentage of 28kt winds at Foulness but they blow in line with runway headings and would not have any adverse operational effect."

**ATC Suitability** "The introduction of any major airport into an existing system must obviously modify flight paths to some extent. . . . However, both Stansted and Foulness are in the same sector and an analysis of possible air routes to and from Foulness proves that a major airport in this area is compatible with the air traffic pattern. Some decision will be needed on the future of Southend airport; there is little doubt that general aviation activity will continue to expand in this country and it is possible that Southend could become a general aviation centre associated with the new international airport.

"The establishment of a third London Airport at Stansted would affect certain military airfields—Wethersfield and others unnamed. No military airfields would be affected by flying operations based on Foulness. It has been authoritatively stated that the full development of Stansted must have some adverse effect on the omnidirectional useability of Heathrow and vice versa. . . . Foulness will not so affect Heathrow, nor be affected by it; neither will it prejudice the full development of Gatwick in this regard."

\*The Third London Airport: Noise Abatement Society. Price £3 3s.